



Department  
for Environment  
Food & Rural Affairs



Scottish Government  
Riaghaltas na h-Alba  
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Llywodraeth Cymru  
Welsh Government

# Public Consultation on Draft Pathway Action Plans for Invasive Non-native Species

Reducing their introduction and spread

June 2025

We are the Department for Environment, Food and Rural Affairs. We're responsible for improving and protecting the environment, growing the green economy, sustaining thriving rural communities and supporting our world-class food, farming and fishing industries.

We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.

This document had been produced with the Scottish and Welsh Governments, which undertake similar activities to benefit their respective countries.



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# Introduction

The term 'non-native species' refers to a species intentionally or unintentionally introduced outside its native range by human actions. An 'invasive non-native species' (INNS) is any non-native animal or plant that has the ability to spread causing damage to:

- the environment
- the economy
- our health
- or the way we live

INNS are one of the main direct drivers of biodiversity loss globally<sup>1</sup> and threaten our ability to meet our wider environmental targets. They also cost the Great Britain (England, Scotland and Wales (GB)) economy an estimated £1.9bn pa<sup>2</sup> and impact our capacity to respond to the climate and nature emergencies that we face. INNS have negative effects on native species populations leading to decreased population sizes and reduced species diversity.

## What are pathway action plans?

Pathways are the routes and mechanisms for the introduction and spread of INNS. Some pathways are ranked as higher risk as they have the potential to introduce greater numbers of high impact INNS.

Reducing the risk posed by pathways of introduction and spread is a key way of tackling the threat posed by INNS. The development of Pathway Action Plans (PAPs) is a key element of INNS prevention and risk management. We have committed to their development in the GB Invasive Non-native Species Strategy and domestic legislation<sup>3</sup>. To help tackle the pathways of introduction and reduce the risks, robust action needs to be taken by:

- the government
- partners

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<sup>1</sup> <https://ipbes.net/invasive-alien-species-assessment>

<sup>2</sup> Figure is for INNS covered by the GB Strategy. Eschen, R, Kadzamira, M, Stutz, S and others. 'An updated assessment of the direct costs of invasive non-native species to the United Kingdom': <https://doi.org/10.1007/s10530-023-03107-2> Biol Invasions 25, 3265–3276 (2023)

<sup>3</sup> Retained EU IAS Regulation 1143/2014; Article 13: <https://www.legislation.gov.uk/eur/2014/1143/contents>.

- landowners
- other relevant organisations
- the public

Five PAPs have been developed by working groups established by the GB Non-native Species Secretariat including representatives from:

- Defra
- the Scottish Government
- Welsh Government
- government agencies
- key delivery partners

These lay out best-practice approaches with key actions for Government, arm's length bodies (ALBs), businesses, NGOs, recreational clubs and individuals to help guide resources and behaviour in the right direction. Actions include raising awareness, for example, by displaying signage and providing information to user groups, implementing and improving biosecurity measures for example, by providing facilities to wash-down equipment after water sports; and promoting best practice amongst industry and user groups.

The PAPs do not change legislation or create burdens or prohibitions.

## Method for prioritising pathways

A comprehensive analysis<sup>4</sup> was undertaken that took into account the unintentional introduction and spread of all non-native species that had established in GB in recent times. An approach was taken that assessed the threat from pathways that have introduced all of the established non-native species in Great Britain since 1950 (to ensure analysis focussed on recently active pathways). Using this evidence-based approach a final model for priority pathway assessment was developed which ranked pathways based on the total impact of these species.

A further analysis that looked at the 'Species of special concern'<sup>5</sup> was also conducted, from which 2 further pathways were prioritised.

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<sup>4</sup> <https://www.nonnativespecies.org/resources-and-projects/publications-and-reports#riskanalysis>

<sup>5</sup> Retained EU IAS Regulation 1143/2014; Article 13: <https://www.legislation.gov.uk/eur/2014/1143/contents>.

In total, 36 pathways of introduction were identified with 7 pathways considered to be key priorities on which to focus initial Pathway Action Plans. These are:

- hull fouling
- horticulture escapes
- contaminants of ornamental plants
- ballast water
- stowaways on fishing equipment
- zoo or botanic garden escapes
- pet escapes.

We will continue to assess the PAP process, and there is potential for additional PAPs to be developed in the future for further pathways.

## PAP development

PAPs covering 6 of the priority pathways have been drafted for;

- zoos and aquaria
- angling
- recreational boating
- horticulture
- pets

These PAPs have been available to be viewed and commented upon in draft form on the GBNNS Secretariat website.

The development of the draft PAPs has involved extensive engagement with partners and other organisations. This approach has provided a wide understanding of each pathway, identification of key risks, and understanding of how those risks can best be mitigated through PAP actions. The extensive engagement and work towards each PAP has allowed for a full set of actions to be developed which specifically target the risks determined to be present in each priority pathway.

Prior to the publication of the finalised PAPs, Defra, the Scottish Government and Welsh Government have a duty to consult the public, as required by the assimilated EU IAS Regulation<sup>6</sup>. We value the input from organisations and the public in this final stage of

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<sup>6</sup> Retained EU IAS Regulation 1143/2014; Article 13: <https://www.legislation.gov.uk/eur/2014/1143/contents>.

development. This consultation provides the opportunity to gather wider feedback on the actions within each PAP. Defra, the Scottish Government and Welsh Government, will consider the responses to the consultation and revise the PAP documents where appropriate, with the overall aim of making the PAPs as comprehensive as possible. This consultation is therefore a final step in developing the PAPs prior to publication.

## How to respond to the consultation

There are 6 pathways covered by 5 separate PAP documents:

- recreational boating
- angling
- horticulture
- zoos and aquaria
- pets

In some cases, there will be overlap of the stakeholders' interests and comments, (for example, angling with recreational boating), however, some stakeholders will only wish to comment on one PAP with no interest in the others. This consultation will therefore provide the opportunity to comment on one, some or all of the PAPs, with separate questions for each PAP.

It should be noted that the zoo and aquaria PAP was developed to cover the whole United Kingdom. This consultation is for Great Britain only. However, the zoo and aquaria PAP has not been amended to be specific to Great Britain. Northern Ireland will run a separate consultation on elements of the zoo PAP which apply to Northern Ireland. Therefore, please focus comments on the zoo and aquaria PAP on Great Britain only in this consultation.

The 'horticulture' PAP has been developed to cover both horticultural escapes and contaminants of ornamental plants pathways, please bear this in mind when answering questions about this PAP.

Please focus on the specific PAP document for which you are answering questions. This consultation is not an opportunity to comment on the prioritisation process or on other pathway areas which might have a PAP developed for them in the future.

Our review process will include standardising some of the text across the documents and ensuring that each document has an appropriate front cover.

### How to respond

- **Citizen Space**

- **Email:** [invasivealienspecies@defra.gov.uk](mailto:invasivealienspecies@defra.gov.uk)
- **Post:** INNS PAP Consultation Coordinator  
Department for Environment, Food and Rural Affairs  
2 Marsham Street  
London  
SW1P 4DF

The consultation period will run for 8 weeks and will close on 18 August 2025.

Defra, the Scottish Government and Welsh Government will consider the responses to the consultation and revise the PAP documents where appropriate, with the overall aim of making the PAPs as comprehensive as possible and publishing final versions by the end of 2025.

## **Special note concerning the ballast water PAP**

Please note that the requirement to develop a PAP for Ballast water has been addressed by the UK acceding to the International Ballast Water Management Convention (“the BWM Convention”). The Maritime and Coastguard Agency (MCA), an executive Agency of the Department for Transport (DfT), carried out a public consultation from 24 March to 16 June 2021 on the draft Merchant Shipping (Control and Management of Ships’ Ballast Water and Sediments) Regulations 2021. These regulations have since been made as The Merchant Shipping (Control and Management of Ships’ Ballast Water and Sediments) Regulations 2022. The Regulations were produced in order to implement into UK law the requirements of the International Convention for the Control and Management of Ships’ Ballast Water and Sediments, 2004. This formed part of the package to allow the UK to accede to the BWM Convention, in May 2022. Full consultation reports can be found here: <https://www.gov.uk/government/consultations/consultation-on-draft-regulations-for-the-control-and-management-of-ships-ballast-water-and-sediments>. As we have already consulted in this area, we will not be asking questions about Ballast water as part of this consultation.

## **Questions**

## **Confidentiality and data protection**

Information provided in response to this consultation document, including personal information, will be shared with relevant policy officials in the Scottish Government and the Welsh Government.



A summary of responses to this consultation will be published on the government website: <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>. An annex to the consultation summary will list all organisations that responded but will not include personal names, addresses or other contact details.

Defra may publish the content of your response to this consultation to make it available to the public without your personal name and private contact details (for example, home address, email address).

If you choose 'Yes' in response to the question asking if you would like anything in your response to be kept confidential, you are asked to state clearly what information you would like to be kept as confidential and explain your reasons for confidentiality. The reason for this is that information in responses to this consultation may be subject to release to the public or other parties in accordance with the access to information law (these are primarily the Environmental Information Regulations 2004 (EIRs), the Freedom of Information Act 2000 (FOIA) and the Data Protection Act 2018 (DPA)). We have obligations, mainly under the EIRs, FOIA and DPA, to disclose information to particular recipients or to the public in certain circumstances. In view of this, your explanation of your reasons for requesting confidentiality for all or part of your response would help us balance these obligations for disclosure against any obligation of confidentiality. If we receive a request for the information that you have provided in your response to this consultation, we will take full account of your reasons for requesting confidentiality of your response, but we cannot guarantee that confidentiality can be maintained in all circumstances.

If you choose 'No' in response to the question asking if you would like anything in your response to be kept confidential, we will be able to release the content of your response to the public, but we won't make your personal name and private contact details publicly available.

There may be occasions when Defra will share the information you provide in response to the consultation, including any personal data with external analysts. This is for the purposes of consultation response analysis and provision of a report of the summary of responses only.

This consultation is being conducted in line with the Cabinet Office "Consultation Principles" which can be found here:

<https://www.gov.uk/government/publications/consultation-principles-guidance>.

How we use your personal data is set out in the consultation and call for evidence exercise privacy notice which can be found here:

<https://www.gov.uk/government/publications/defras-consultations-and-call-for-evidence-exercises-privacy-notice>.

If you have any comments or complaints about the consultation process, please email: [consultation.coordinator@defra.gov.uk](mailto:consultation.coordinator@defra.gov.uk).

## Introductory questions

**Q1. Would you like your response to be confidential?**

- Yes
- No
- If you answered Yes to this question, please give your reason.

**Q2. What is your name?**

**Q3. What is your correspondence address?**

Please provide an email address or telephone number unless unable to. If you enter your email address then you will automatically receive an acknowledgement email when you submit your response.

**Q4. Please tell us in what capacity you are responding to the consultation by selecting from the following:**

- individual
- research organisation
- sector trade body or membership organisation
- ecologist
- academic
- planning consultant
- developer or builder
- local authority
- public body
- non-governmental organisation
- landowner or occupier
- other (please state)

**Q5. If responding on behalf of an organisation, please provide the name of the organisation you are responding for.**

**Q6. Please indicate your specific areas of interest in responding to this consultation:**

- boating
- angling
- marine

- horticulture
- zoo
- pets
- botanical garden
- aquarium
- eNGO
- rescue centre
- hobbyist
- species interest group
- other (please specify)

**Q7. Please indicate which location your response relates to, selecting from the following:**

- Great Britain
- England
- Scotland
- Wales
- other (please state, where)

## PAP questions

**Q8. Recreational boating PAP: Are you content with the actions within this PAP? Yes or no**

**Q9. If no, what do you think could be improved?**

- missing action
- action could be improved
- missing text
- text could be improved
- other

Please refer to Q10 to expand on any changes.

**Q10. Please provide details of the changes you would make to this PAP or anything else you think is important.**

Please refer to actions by number, and mention if it should be deleted, changed (and how so), or suggest additional actions.

**Q11. Angling PAP: Are you content with the actions within this PAP? Yes or no**

**Q12. If no, what do you think could be improved?**

- missing action

- action could be improved
- missing text
- text could be improved
- other

Please refer to Q13 to expand on any changes.

**Q13. Please provide details of the changes you would make to this PAP or anything else you think is important.**

Please refer to actions by number, and mention if it should be deleted, changed (and how so), or suggest additional actions.

**Q14. Horticulture PAP: Are you content with the actions within this PAP? Yes or no**

**Q15. If no, what do you think could be improved?**

- missing action
- action could be improved
- missing text
- text could be improved
- other

Please refer to Q16 to expand on any changes.

**Q16. Please provide details of the changes you would make to this PAP or anything else you think is important.**

Please refer to actions by number, and mention if it should be deleted, changed (and how so), or suggest additional actions.

**Q17. Zoos PAP: Are you content with the actions within this PAP? Yes or no**

**Q18. If no, what do you think could be improved?**

- missing action
- action could be improved
- missing text
- text could be improved
- other

Please refer to Q19 to expand on any changes.

**Q19. Please provide details of the changes you would make to this PAP or anything else you think is important.**

Please refer to actions by number, and mention if it should be deleted, changed (and how so), or suggest additional actions.

**Q20. Pets PAP: Are you content with the actions within this PAP? Yes or no**

**Q21. If no, what do you think could be improved?**

- missing action
- action could be improved
- missing text
- text could be improved
- other

Please refer to Q22 to expand on any changes.

**Q22. Please provide details of the changes you would make to this PAP or anything else you think is important.**

Please refer to actions by number, and mention if it should be deleted, changed (and how so), or suggest additional actions.

**Consultee Feedback on the Online Survey**

Dear Consultee

Thank you for taking your time to participate in this online survey. It would be appreciated, if you can provide us with an insight into how you view the tool and the areas you feel are in need of improvement, by completing our feedback questionnaire.

**Overall, how satisfied are you with our online consultation tool?**

very satisfied

satisfied

neither satisfied nor dissatisfied

dissatisfied

very dissatisfied

don't know

Please give us any comments you have on the tool, including suggestions on how we could improve it.